

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026694**Date Inspected:** 10-Nov-2011**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Arrival Time:****OSM Departure Time:****Location:** Job Site**CWI Name:** Fred Von Hoff**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Orthotropic Bridge Girder (OBG) Sections: According to the documents being used by QC personnel these welds are designated as being a Seismographic Performance Critical Member (SPCM).

14E-PP126.2-E3.7 – Vent Hole - This QA Inspector observed ABF welding personnel Salvador Sandoval (#2202) in the process of fitting up the Vent Hole infill plate into position at this location. This QA Inspector observed the infill plate was marked designating the direction of roll on the plate and verified the bevel angle prior to being fit into position. This QA Inspector observed a copper plate was positioned below the infill plate which appeared to be used as a backing. This QA Inspector observed the base metals being preheated with a hand held gas torch prior to being tack welded. See photos of infill plate and copper baking below. This QA Inspector observed QC Inspector Fred Von Hoff perform a fit up inspection and was informed it was accepted. This QA Inspector performed a fit up verification and the work appeared to comply with the contract requirements. This QA Inspector observed QC Inspector Fred Von Hoff verify the following Shielded Metal Arc Welding (SMAW) parameters for ABF welding personnel Salvador Sandoval (#2202); 135 amperes. This QA Inspector observed a 3.2 mm diameter E7018H4R electrode was being used in the flat (1G) position. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1050-CU being used by the QC Inspector. This QA Inspector observed the root pass and one additional weld pass was completed prior to ABF welding

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## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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personnel Salvador Sandoval (#2202) being requested to relocate to different work station.

14E-PP128-E4 – Lifting Lug Hole (LLH) LLH-1 thru LLH-4: This QA Inspector randomly observed QC Inspector John Pagliero performing Ultrasonic Testing (UT) on the welds at these locations. This QA Inspector observed scanning was being performed using a 70 degree shearwave transducer from both sides of the weld joint. The techniques observed for scanning, determining a defect and sizing (length) appeared to comply with the contract requirements. This QA Inspector observed LLH-1 was accepted and LLH-2, LLH-3 and LLH-4 were rejected by QC Inspector John Pagliero.

14E-PP128-E4 – Lifting Lug Hole (LLH) LLH-3 and LLH-4: This QA Inspector was informed by QC Inspector he had previously inspected and accepted the bottom side of these welds using the visual and Magnetic Particle Testing (MT) methods. This QA Inspector performed a random visual verification and the work appeared to comply with the contract requirements.

14E-PP128-E3 – Lifting Lug Hole (LLH) LLH-3 and LLH-4: This QA Inspector was informed by QC Inspector he had previously inspected and accepted the bottom side of these welds using the visual and Magnetic Particle Testing (MT) methods. This QA Inspector performed a random visual verification and the work appeared to comply with the contract requirements.

14E-PP128 E3– Lifting Lug Hole (LLH) LLH-1 and LLH-2: This QA Inspector was informed by QC Inspector Fred Von Hoff the top section of the welds at this location had been previously welded by ABF welding personnel Richard Garcia (#5892). This QA Inspector observed ABF welding personnel Salvador Sandoval (#2202) had been assigned to back gouge and weld the bottom side of these welds. This QA Inspector randomly observed ABF welding personnel Salvador Sandoval (#2202) using the carbon arc process to back gouge these joints from the bottom side. This QA Inspector observed QC Inspector Fred Von Hoff perform a visual and MT on the back gouged welds and was informed he had accepted the work. This QA Inspector performed a visual verification of the back gouge and the work appeared to comply with the contract requirements. This QA Inspector observed a hand held gas torch was used to preheat the base metal prior to welding and observed QC Inspector Fred Von Hoff verify the following welding parameters; 128 amperes. This QA Inspector observed a 3.2 mm diameter E7018H4R electrode was being used in the overhead (4G) position. The welding observed appeared to comply with ABF-WPS-D15-1050-CU being used by the QC Inspector. This QA Inspector observed the welding at this location was not completed this shift.

This QA Inspector verbally informed QA SPCM Lead Inspector, Daniel Reyes, of the issues noted in this report for compliance therefore for further details of issues of significance see QA SPCM Lead Inspector, Daniel Reyes, Daily Inspection Report (6031) for this date.

### Summary of Conversations:

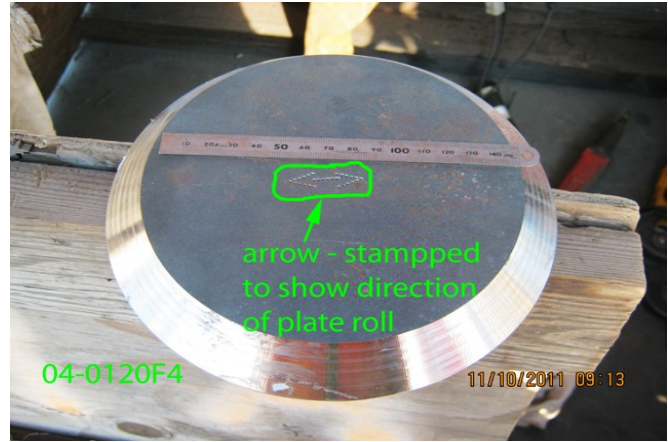
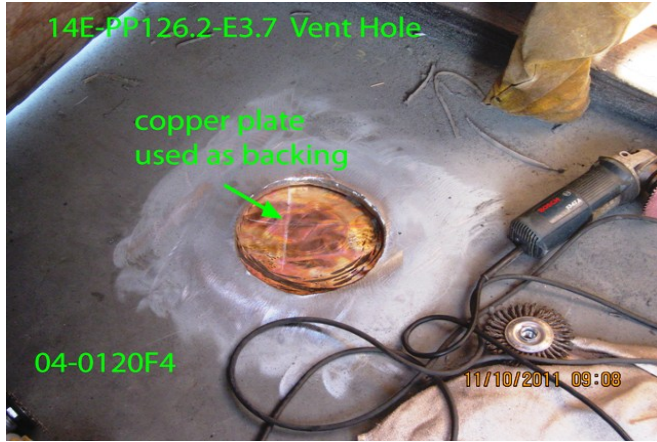
This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted above there were no notable conversations.

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## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Hager,Craig

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer

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